CLAIMS

I claim:

1. A method of comparing two datasets comprising:

determining a first histogram corresponding to a distribution of values in a first dataset,

determining a plurality of palette values corresponding to a specified number of different values in the first dataset,

determining a first histogram vector corresponding to the first histogram,

the first histogram vector comprising elements that each correspond to a palette value of the plurality of palette values,

identifying values in a second dataset corresponding to the plurality of palette values,

determining a second histogram vector corresponding to the values in the second dataset, and

comparing the first histogram vector to the second histogram vector.

2. The method of claim 1, wherein

determining the second histogram vector includes a recursive determination of the second histogram vector based on a prior determined histogram vector and elements that are contained in the prior determined histogram vector but not the second histogram vector, and elements that are contained in the second histogram vector but not the prior determined histogram vector.

3. The method of claim 2, wherein

the recursive determination includes:

determining one or more row vectors, based on corresponding one or more prior row vectors, and

determining the second histogram vector, based on the prior determined histogram vector and the one or more row vectors.

4. The method of claim 1, wherein the first dataset corresponds to first pixel values of a target image and the second dataset corresponds to second pixel values of a region of a source image.

5. The method of claim 4, wherein the first pixel values and the second pixel values correspond to at least one of a hue component, a saturation component, and a brightness component of each pixel.

6. The method of claim 1, wherein the plurality of palette values corresponds to the values in the first dataset having a higher frequency count in the first histogram than other values in the first dataset.

7. The method of claim 1, wherein the specified number of different values is substantially less than a maximum number of possible different values in the first dataset.

8. The method of claim 1, further including

mapping values in the first and second datasets to a plurality of histogram classes, and wherein

each palette value corresponds to a histogram class of the plurality of histogram classes.

9. The method of claim 1, wherein

identifying values in the second dataset includes

creating a palette dataset corresponding to the second dataset that identifies each occurrence of a palette value of the plurality of palette values, and

determining the second histogram vector includes

providing a count of a number of occurrences of each palette value in the palette dataset.

13. A computer program that is configured to effect the following operations when executed by a processing system:

create a first histogram corresponding to a distribution of values in a first dataset,

determine a plurality of palette values corresponding to a specified number of different values in the first dataset,

determine a first histogram vector corresponding to the first histogram,

the first histogram vector comprising elements that each correspond to a palette value of the plurality of palette values,

identify values in a second dataset corresponding to the plurality of palette values,

determine a second histogram vector corresponding to the values in the second dataset, and

compare the first histogram vector to the second histogram vector.

14. The computer program of claim 13, wherein the computer program is further configured to identify a select dataset of a plurality of datasets, including the second dataset, based on a similarity of the target to each of the plurality of datasets, by effecting the following operations:

identify values in each of the plurality of datasets corresponding to the plurality of palette values,

determine a plurality of histogram vectors, each histogram vector corresponding to the values in each of the plurality of datasets,

compare the first histogram vector to each histogram vector to determine a comparative measure associated with each histogram vector, and

identify the select database based on the comparative measure associated with each histogram vector.

15. The computer program of claim 14, wherein

the first dataset corresponds to first pixel values of a target image and

each of the plurality of datasets corresponds to pixel values of each dataset.

16. The computer program of claim 15, wherein

the first pixel values and the second pixel values correspond to at least one of a hue component, a saturation component, and a brightness component of each pixel.

17. An image processing system comprising:

a processor that is configured to

create a first histogram corresponding to a distribution of values in a first dataset,

determine a plurality of palette values corresponding to a specified number of different values in the first dataset,

determine a first histogram vector corresponding to the first histogram,

the first histogram vector comprising elements that each correspond to a palette value of the plurality of palette values,

identify values in a second dataset corresponding to the plurality of palette values,

determine a second histogram vector corresponding to the values in the second dataset, and

compare the first histogram vector to the second histogram vector; and

a memory, operably coupled to the processor, that is configured to store a representation of the values in the second dataset corresponding to the plurality of palette values, to facilitate determining the second histogram vector.

18. The image processing system of claim 17, further including

an application-specific device that is configured to determine the second histogram vector based on the representation of the values that is stored in the memory.

19. The image processing system of claim 17, wherein

the first dataset corresponds to first pixel values of a target image and

each of the plurality of datasets corresponds to pixel values of each dataset.

20. The image processing system of claim 18, wherein

the first pixel values and the second pixel values correspond to at least one of a hue component, a saturation component, and a brightness component of each pixel.